

# SAFETY DATA SHEET



## PROPULSE®

Version 1.0 / CDN  
102000036908

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Revision Date: 04/22/2020  
Print Date: 12/17/2020

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### Product identifier

Trade name PROPULSE®  
Product code (UVP) 86241889  
SDS Number 102000036908  
PCP Registration No. 33955

#### Relevant identified uses of the substance or mixture and uses advised against

Use Fungicide  
Restrictions on use See product label for restrictions.  
Information on supplier  
Supplier Bayer CropScience Inc  
#200, 160 Quarry Park Blvd, SE  
Calgary, Alberta T2C 3G3  
Canada  
Responsible Department Email: SDSINFO.BCS-NA@bayer.com  
Emergency telephone no.  
Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577  
Product Information Telephone Number 1-888-283-6847

### SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations  
Acute toxicity(Inhalation): Category 4

Labelling in accordance with Part 3 of the Hazardous Products Regulations



Signal word: Warning

Hazard statements  
Harmful if inhaled.

Precautionary statements  
Avoid breathing mist/ spray.

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Use only outdoors or in a well-ventilated area.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
Call a POISON CENTER/doctor/physician if you feel unwell.  
Protect from sunlight.

### Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.  
No health hazards not otherwise classified.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Fluopyram	658066-35-4	17.4
Prothioconazole	178928-70-6	17.4

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## SECTION 4: FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician or poison control center immediately.
<b>Eye contact</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

**Symptoms** To date no symptoms are known.

### Indication of any immediate medical attention and special treatment needed

**Treatment** Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

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### SECTION 5: FIREFIGHTING MEASURES

#### Extinguishing media

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Sand

**Unsuitable** High volume water jet

**Special hazards arising from the substance or mixture** Dangerous gases are evolved in the event of a fire.

#### Advice for firefighters

**Special protective equipment for firefighters** Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**Further information** Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Contain the spread of the fire-fighting media.

**Flash point** > 93.3 °C

**Auto-ignition temperature** No data available

**Lower explosion limit** No data available

**Upper explosion limit** No data available

**Explosivity** Not applicable

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

**Precautions** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

#### Methods and materials for containment and cleaning up

**Methods for cleaning up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**Additional advice** Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.

**Reference to other sections** Information regarding safe handling, see section 7.  
Information regarding personal protective equipment, see section 8.  
Information regarding waste disposal, see section 13.

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## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

### Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers** Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep away from direct sunlight. Protect from freezing.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Fluopyram	658066-35-4	0.34 mg/m <sup>3</sup> (TWA)		OES BCS*
Prothioconazole	178928-70-6	1.4 mg/m <sup>3</sup> (SK-ABS)		OES BCS*

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

### Exposure controls

#### Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

**Respiratory protection** When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

**Hand protection** Chemical resistant nitrile rubber gloves

**Eye protection** Safety glasses with side-shields

**Skin and body protection** Wear long-sleeved shirt and long pants and shoes plus socks.

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**General protective measures** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water.  
Keep and wash PPE separately from other laundry.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	white to light beige
<b>Physical State</b>	Liquid
<b>Odor</b>	mild sweet
<b>Odour Threshold</b>	No data available
<b>pH</b>	4 - 6 (10 %) (23 °C) (deionized water)
<b>Viscosity, kinematic</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density (Air = 1)</b>	No data available
<b>Density</b>	ca. 1.15 g/cm <sup>3</sup> (20 °C)
<b>Evaporation rate</b>	No data available
<b>Boiling Point</b>	No data available
<b>Melting / Freezing Point</b>	No data available
<b>Water solubility</b>	No data available
<b>Decomposition temperature</b>	Stable under normal conditions.
<b>Self-accelarating decomposition temperature (SADT)</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Viscosity</b>	300 - 500 mPa.s (20 °C) Velocity gradient 20 /s
<b>Flammability</b>	No data available
<b>Flash point</b>	> 93.3 °C
<b>Auto-ignition temperature</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Upper explosion limit</b>	No data available
<b>Explosivity</b>	Not applicable
<b>Particle size</b>	No data available
<b>Other information</b>	Further safety related physical-chemical data are not known.

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## SECTION 10: STABILITY AND REACTIVITY

### Reactivity

<b>Thermal decomposition</b>	Stable under normal conditions.
<b>Chemical stability</b>	Stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	No incompatible materials known.
<b>Hazardous decomposition products</b>	No decomposition products expected under normal conditions of use.

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## SECTION 11: TOXICOLOGICAL INFORMATION

**Exposure routes** Inhalation, Ingestion, Eye contact

### Immediate Effects

**Inhalation** May be harmful if inhaled.

### Information on toxicological effects

<b>Acute oral toxicity</b>	LD50 (female Rat) > 5,000 mg/kg
<b>Acute inhalation toxicity</b>	LC50 (male/female combined Rat) > 2.22 mg/l Exposure time: 4 h Determined in the form of liquid aerosol. highest concentration tested No deaths
<b>Acute dermal toxicity</b>	LD50 (male/female combined Rat) > 5,050 mg/kg
<b>Skin corrosion/irritation</b>	No skin irritation (Rabbit)
<b>Serious eye damage/eye irritation</b>	No eye irritation (Rabbit)
<b>Respiratory or skin sensitisation</b>	Skin: Non-sensitizing. (Guinea pig)

### Assessment STOT Specific target organ toxicity – single exposure

Fluopyram: Based on available data, the classification criteria are not met.  
Prothioconazole: Based on available data, the classification criteria are not met.

### Assessment STOT Specific target organ toxicity – repeated exposure

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Fluopyram did not cause specific target organ toxicity in experimental animal studies.  
Prothioconazole did not cause specific target organ toxicity in experimental animal studies.

### Assessment mutagenicity

Fluopyram was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

### Assessment carcinogenicity

Fluopyram caused at high dose levels an increased incidence of tumours in rats in the following organ(s): Liver.  
Fluopyram caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Thyroid.  
The tumours seen with Fluopyram were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers these tumours is not relevant to humans.  
Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.

### ACGIH

None.

### NTP

None.

### IARC

None.

### OSHA

None.

### Assessment toxicity to reproduction

Fluopyram caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Fluopyram is related to parental toxicity.  
Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity.

### Assessment developmental toxicity

Fluopyram caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Fluopyram are related to maternal toxicity.  
Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole are related to maternal toxicity.

### Aspiration hazard

Based on available data, the classification criteria are not met.

### Further information

Acute toxicity studies have been bridged from a similar formulation(s).  
The non-acute information pertains to the active ingredient(s).

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### SECTION 12: ECOLOGICAL INFORMATION

<b>Toxicity to fish</b>	LC50 (Oncorhynchus mykiss (rainbow trout)) 1.83 mg/l Exposure time: 96 h The value mentioned relates to the active ingredient prothioconazole.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 1.3 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient prothioconazole.
<b>Toxicity to aquatic plants</b>	IC50 (Raphidocelis subcapitata (freshwater green alga)) 2.18 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole. ErC50 (Skeletonema costatum) 0.03278 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole. EC10 (Skeletonema costatum) 0.01427 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole.
<b>Biodegradability</b>	Fluopyram: Not rapidly biodegradable Prothioconazole: Not rapidly biodegradable
<b>Koc</b>	Fluopyram: Koc: 279 Prothioconazole: Koc: 1765
<b>Bioaccumulation</b>	Fluopyram: Bioconcentration factor (BCF) 18 Does not bioaccumulate. Prothioconazole: Bioconcentration factor (BCF) 19 Does not bioaccumulate.
<b>Mobility in soil</b>	Fluopyram: Moderately mobile in soils Prothioconazole: Slightly mobile in soils
<b>Additional ecological information</b>	No other effects to be mentioned.
<b>Environmental precautions</b>	Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Do not apply when weather conditions favor runoff or drift. Apply this product as specified on the label.

### SECTION 13: DISPOSAL CONSIDERATIONS

#### Waste treatment methods

**Product** Dispose of contents/container in accordance with local regulation.



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**Contaminated packaging** Do not re-use empty containers.  
Triple rinse containers.  
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.  
If burned, stay out of smoke.  
Follow advice on product label and/or leaflet.

## SECTION 14: TRANSPORT INFORMATION

### TDG

UN number	<b>3082</b>
Labels	9
Packaging group	III
Marine pollutant	Marine pollutant
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROTHIOCONAZOLE)

### 49CFR

Not dangerous goods / not hazardous material

### IMDG

UN number	<b>3082</b>
Class	9
Packaging group	III
Marine pollutant	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROTHIOCONAZOLE SOLUTION)

### IATA

UN number	<b>3082</b>
Class	9
Packaging group	III
Environm. Hazardous Mark	YES
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROTHIOCONAZOLE SOLUTION )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

### Further Information

Exempt from regulation when transported by road or rail, in accordance with TDG Regulations 1.45.1.  
This exemption provides that this product does not require dangerous goods shipping documentation or safety marks when transported on land by road or rail.

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## SECTION 15: REGULATORY INFORMATION

PCP Registration No. 33955

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## SECTION 16: OTHER INFORMATION

### Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

### NFPA 704 (National Fire Protection Association):

Health - 2      Flammability - 1      Instability - 0      Others - none

### HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 1      Flammability - 1      Physical Hazard - 0      PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

**Reason for Revision:** New Safety Data Sheet due to change in numbering scheme.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

**Revision Date:** 04/22/2020

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